SERVICE MANUAL 1030

marantz

model 1030

console Stereo amplifier

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1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 1030 Stereo Console Amplifier.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instruction should be read carefully. No attempt should be made to proceed without a good understanding of the operation in the circuits.

The part lists furnish information by which replacement part may be ordered from the Marantz Company. A simple description is included for parts which can be usually be obtained through local suppliers.

2. PRE-AMPLIFIER

Signals from the input jacks (TUNER, TAPE, AUX) are applied to the selector switch.

Signals from the PHONO jacks or MIC jack are applied to the other section of the selector switch, then, led to the phono-amplifier and equalized to match the RIAA curve for flat frequency response. The gain of the phono-amplifier consisting of direct coupled circuit (H901 and H903) is 38 dB.

The outputs of the phono-amplifier are led to the selector switch. The selector switch selects one of signals from PHONO, MIC, TUNER, or AUX jacks and send it to the TAPE MONITOR switch and TAPE OUT jacks. The selected signals are then applied to the balance and volume controls, then to the pre-amplifier consisting of H501, H503 and H505 through Mono switch.

The frequency response is varied by the Bass and Treble controls, and the resultant output are led to PRE OUT jacks through High-cut and Low-cut filter networks. These networks are switched in and out from the circuit by the push-switches.

3. MAIN AMPLIFIER

Transistor H701 is a pre-driver coupled to the transistor H703 through capacitor C711. Transistor H703 drives the inverter transistors H709 and H711 which, in turn, drive the power stage consisting of H001 and H002. Transistors H705 and H707 are current limitters operating as a power protection circuits.

Excessive currents flowing into the power stage are detected by the resistors R741 and R745 and the resultant variations are applied to the transistors H705 and H707 and make them turned on. This decreases the current flowing into the H709 and H711. In this way the currents flowing in the power stage (H001 and H002) are restricted within a safe value.

4. POWER SUPPLY UNIT

This power supply unit consisting of a transistor H801, which operates as a lipple filter, provides +35V DC to the Phono-amplifier and +27V DC to the Tone Amplifier.

5. TROUBLE ANALYSIS

1. Excessive line consumption	a. Check for shorted H007, H802, H803. b. Check for shorted transistor H001 through H004. Check L001 for short
2. No line consumption or zero bias	a. Check line cord, fuse, shorted H005, H006, H713, H714. b. Check for open rectifiers H007 H802, H803.
3. High hum and noise level	a. Check filter capacitors C005, C703, C704.
4. Parasitic oscillation	a. Check for defective C705, C706, C713, C714, C723, C724, C727, C728.
5. Improper clipping	a. Check for proper adjustment R723, R724.

6. POWER AMPLIFIER ADJUSTMENT

1. Connect a VTVM across the resistor R747 and adjust the trimming resistor R729 until the VTVM reads 7.5mV DC. For the other channel connect the VTVM across the R748 and adjust the R730 for the same reading.
2. Connect a oscilloscope across the speaker terminals. Apply an audio signal of 1KHz to the AUX jacks and increase the audio signal until the audio output on the scope begin to clip. Adjust the trimming resistor R723 for equal and symmetrical clipping. For the other channel adjust the R724.

7. PERFORMANCE VERIFICATION

Test Procedure

A. Test Equipment

Refer to Table 1 for required test equipment.

B. Preliminary Procedures.

1. Make the test setup shown in Figure 1 with the instrument controls set in the following positions:

Line Switch	off
Variable-line switch	variable
Watt Meter Switch	on
Variac	0 (fully CCW)
Load	8 ohms (0.5 mfd – off)
Audio Generator	Frequency 1KHz
Output	5V range
Gain Minimum	
AC Volt Meter	30V range

2. Make sure that connections between the resistive load and the system terminals of the Model 1030 have negligible resistance compared with the resistance of the load itself. Appreciable resistance in wiring adds to the total load, resulting in inaccurate measurements of output power.

3. Connect amplifier output to load and connect AC cord to line power. Connect a shorting plug to the Phono input jack of the model 1030.
4. Remove the top cover.

C. Total Hum and Noise Test

1. With shorting plugs connected to the Phono input jacks and a 8-ohm resistive load connected across the speaker system output terminals, connect a distortion analyzer across the load.

   NOTE: In this test and tests that follow, if distortion analyzer used does not contain a built-in voltmeter, a VTVM may be substituted.
2. Set the distortion analyzer controls for voltage measurements and apply power to the amplifier. Set the volume control fully CCW. Set the SELECTOR switch to PHONO.
3. If the distortion analyzer indicates more than 2.5mV, refer to the trouble analysis section of this manual.
4. Set the volume control fully CW. If the distortion analyzer indicates more than 15mV refer to the trouble analysis section of this manual.

D. Maximum Power Output

1. Connect the audio oscillator to the AUX input. Set audio oscillator frequency to 1 KHz. Set SELECTOR switch to AUX.
2. With the distortion analyzer connected across the output load (8 ohms), set the analyzer on the 30V AC scale.
3. Turn the analyzer on and increase the audio oscillator output to 180mV, and verify the analyzer indicates more than 11V.

E. Harmonic Distortion Test

1. Set the frequency of the audio oscillator and the distortion analyzer to 20 KHz.
2. Set the controls of the analyzer for voltage measurement on the 30-volt scale.
3. Adjust the audio oscillator output level until the analyzer meter indicates 11 volts.
4. Switch the distortion analyzer to Set Level – Manual mode, and adjust SENSITIVITY for full scale reading on 0-1 scale.
5. Measure the total harmonic distortion with the analyzer and verify it is less than 0.5%.

   NOTE: Any parasitic oscillation in the amplifier will be displayed on the oscilloscope when capacitance is switched into the load.
6. Switch the distortion analyzer back to SET LEVEL MANUAL.
   (Do not adjust sensitivity of analyzer.)
7. Change the frequency of the audio oscillator and distortion analyzer to 1 KHz. Adjust audio oscillator output as necessary to have a full scale reading on the 0-1 scale on the analyzer.
8. Measure the distortion, verifying it is no greater than 0.5%.
9. Repeat steps 7 and 8, changing frequency to 40Hz.
   Distortion should be no more than 0.5%.
10. Check for parasitic oscillations; there should be none.

F. Channel Separation

1. Set audio oscillator to 20 KHz. Connect oscillator to channel L AUX input only, with shorting plug (10K ohm) in channel R AUX input. Connect distortion analyzer to SPEAKER output terminals channel L.
2. Adjust oscillator output until distortion analyzer indicates 0 dB.
3. Measure channel R output. Distortion analyzer should indicate −30 dB or greater.
4. If indication is less than −30 dB, adjust input wires to preamp board until reading is −30 dB or greater.

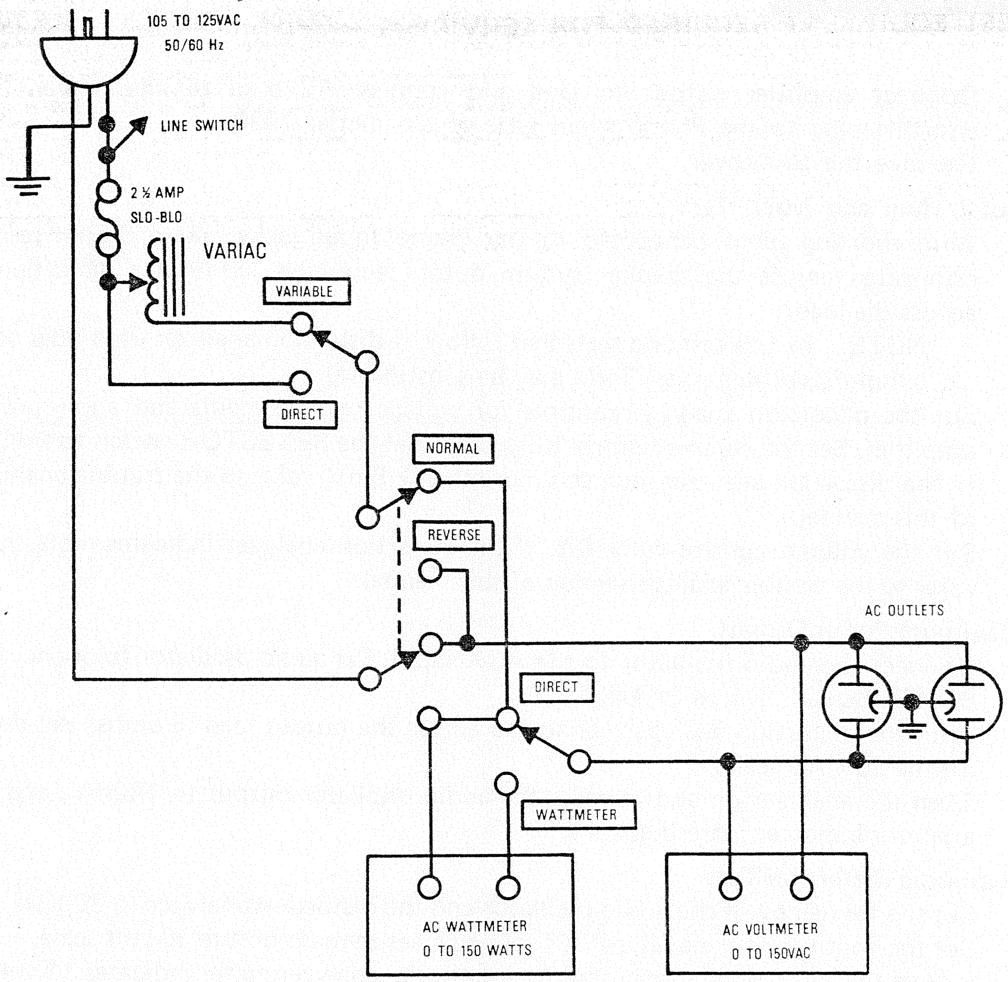

105 TO 125VAC
50/60 Hz
LINE SWITCH
2 ½ AMP
SLO-BLO
VARIAC
VARIABLE
DIRECT
NORMAL
REVERSE
AC OUTLETS
DIRECT
WATTMETER
AC WATTMETER
0 TO 150 WATTS
AC VOLTMETER
0 TO 150VAC

Figure 1. AC Power Control Box Simplified Schematic

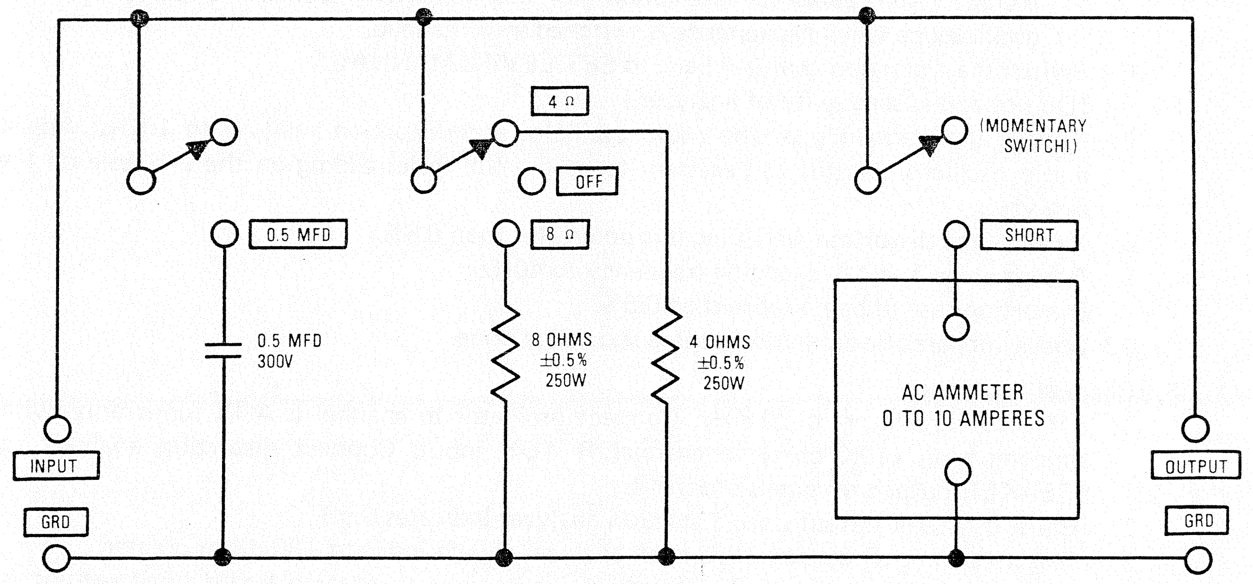

4 Ω
OFF
8 Ω
(MOMENTARY
SWITCH)
0.5 MFD
SHORT
0.5 MFD
300V
8 OHMS
±0.5%
250W
4 OHMS
±0.5%
250W
AC AMMETER
0 TO 10 AMPERES
INPUT
GRD
OUTPUT
GRD

Figure 2. Amplifier Output Load Box Simplified Schematic

8. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 1030 Stereo Console Amplifier. The wattmeter, ac voltmeter, and variac may be assembled as a test fixture as shown schematically in Figure 1, and the load resistors and ac ammeter may be assembled into a second test fixture as shown in Figure 2.

Item	Manufacturer and Model No. (or equivalent)	Use
Distortion Analyzer	Hewlett Packard, Model 331A or 333A	Measures distortion and voltage of amplifier output.
Audio Oscillator	Weston Model CVO-100P (NOTE: Less than 0.02 percent residual distortion is required.)	Sinewave and squarewave signal source.
Oscilloscope	Tektronix, Model 503; Data, Model 555	Waveform analysis and troubleshooting.
VTVM	RCA Senior Volt-Ohmyst, Model WV-98C	Voltage and resistance measurements.
AC Wattmeter	Simpson, Model 390	Monitors primary power consumption of amplifier.
AC Ammeter (0 to 10 amps)	Commercial Grade	Monitors amplifier output under short circuit condition.
Line Voltmeter (0 to 150 vac)	Commercial Grade	Monitors potential of primary power to amplifier.
Variable Autotransformer (0 to 140 vac, 10 amps)	Powerstat, Model 116B	Adjusts level of primary power to amplifier.
Shorting Plug	Use phono plug with 600 ohms across center pin and shell.	Shorts amplifier input to eliminate noise pickup.
Power Supply Bleeder Resistor (10 ohms at 1 W)	Commercial Grade	Discharges power supply filter capacitors prior to disassembly or resistance measurements.
Output Load Resistor (8Ω ± 0.5%, 250W)	Commercial Grade	Provides 8-ohm load for amplifier output termination.
Output Load Resistor (4Ω ± 0.5%, 250W)	Commercial Grade	Provides 4-ohm load for amplifier output termination.
Output Load Capacitor (0.5 mfd)	Mylar	Provides capacitive load for instability checks.
AC Power Control Box	Optional Item. Fabricate in accordance with Figure 1.	Monitors and controls primary power for amplifier.
Amplifier Output Load Box	Optional Item. Fabricate in accordance with Figure 2.	Provides various amplifier loads and can monitor shorted output.

9. VOLTAGE CONVERSION

This model is equipped with a universal power transformer to permit operation at 100, 120, 200, 220 and 240V AC 50 to 60Hz.

To convert the Model 1030 to the required voltage perform the following steps:

1. Remove the top cover.
2. Remove the Transformer Wire Connection Terminal Cover, loosen two Cover mounting screws on the rear panel. see Fig. 3.
3. Change the jumper wires as illustrated in Fig. 4 for the required AC voltage and replace the fuse as instructed.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

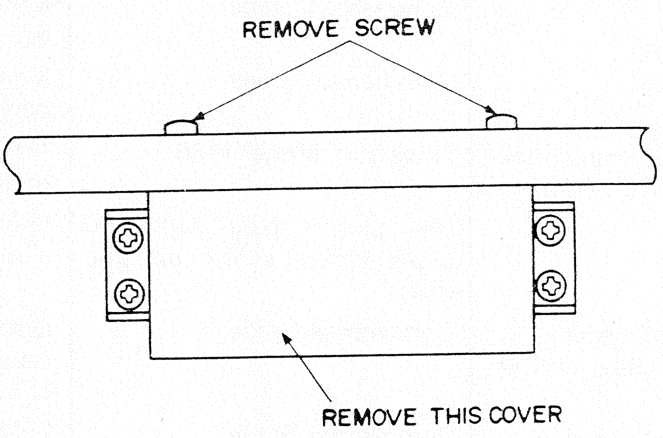
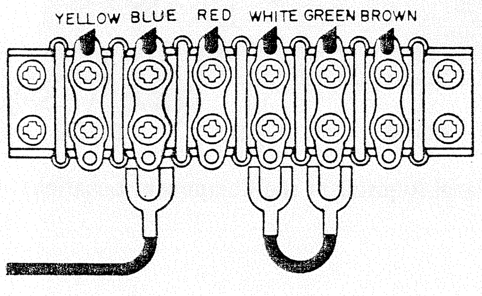


Figure 3. Remove the Terminal Cover

For 200V Operation
(Use 1 A Fuse)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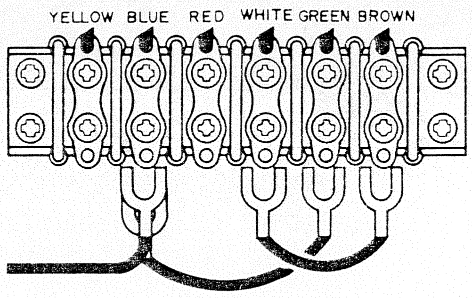
BLUE
RED
WHITE
GREEN
BROWN

For 100 V Operation
(Use 2 A Fuse)


YELLOW
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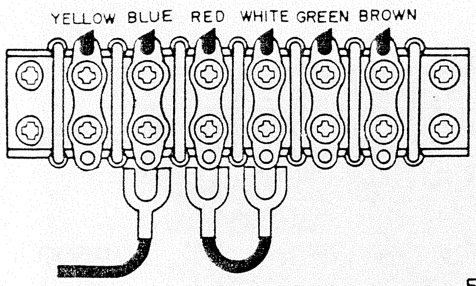
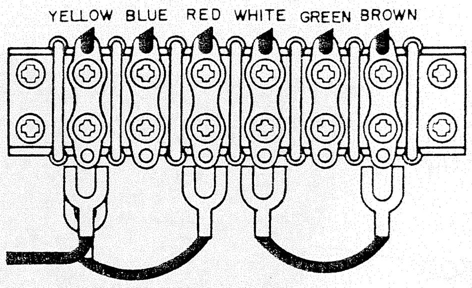
RED
WHITE
GREEN
BROWN

For 220 V Operation
(Use 1 A Fuse)


YELLOW
BLUE
RED
WHITE
GREEN
BROWN

For 120 V Operation
(Use 1.5A Fuse)


YELLOW
BLUE
RED
WHITE
GREEN
BROWN

For 240V Operation
(Use 1 A Fuse)

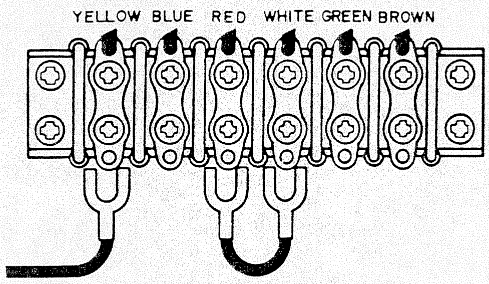
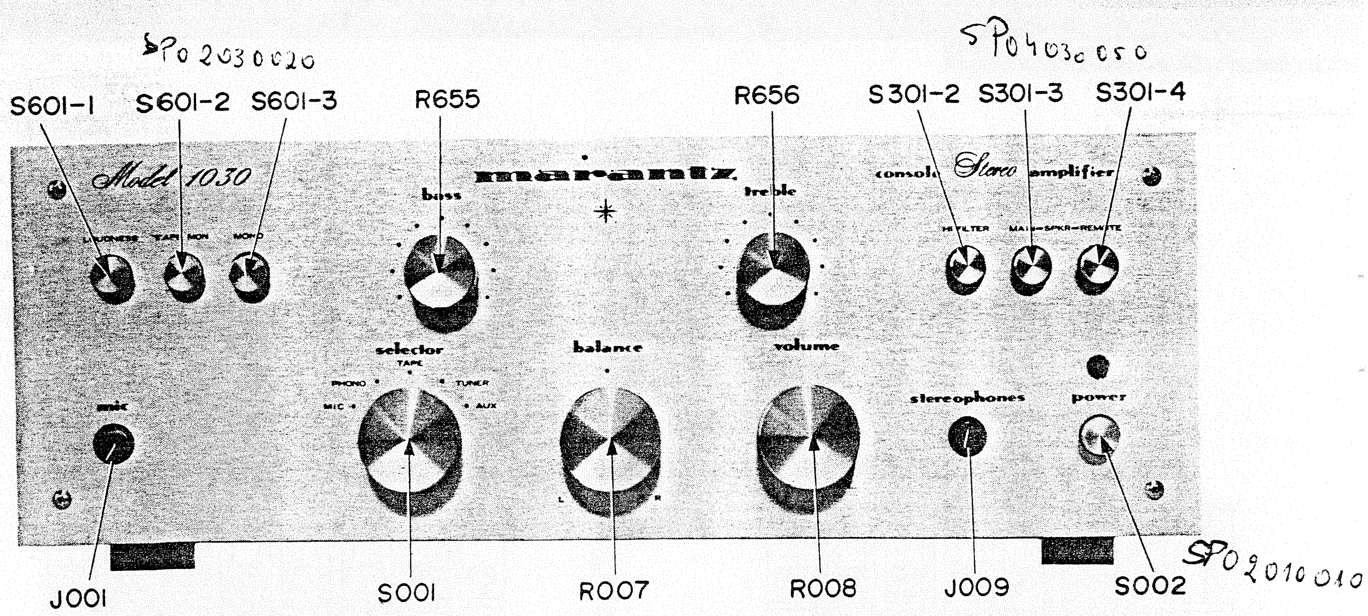

YELLOW
BLUE
RED
WHITE
GREEN
BROWN

Figure 4. Voltage Conversion Chart


S601-1
S601-2
S601-3
R655
R656
S301-2
S301-3
S301-4
Model 1030
marantz
console Stereo amplifier
bass
treble
LOUDNESS
TAPE MON
MONO
HI FILTER
MAIN—SPKR—REMOTE
selector
TAPE
PHONO
TUNER
MIC
AUX
balance
L
R
volume
mic
stereophones
power
J001
S001
R007
R008
J009
S002

SP02030020

SP04030050

SP02010010

Figure 5. Front Panel Adjustment and Component Locations

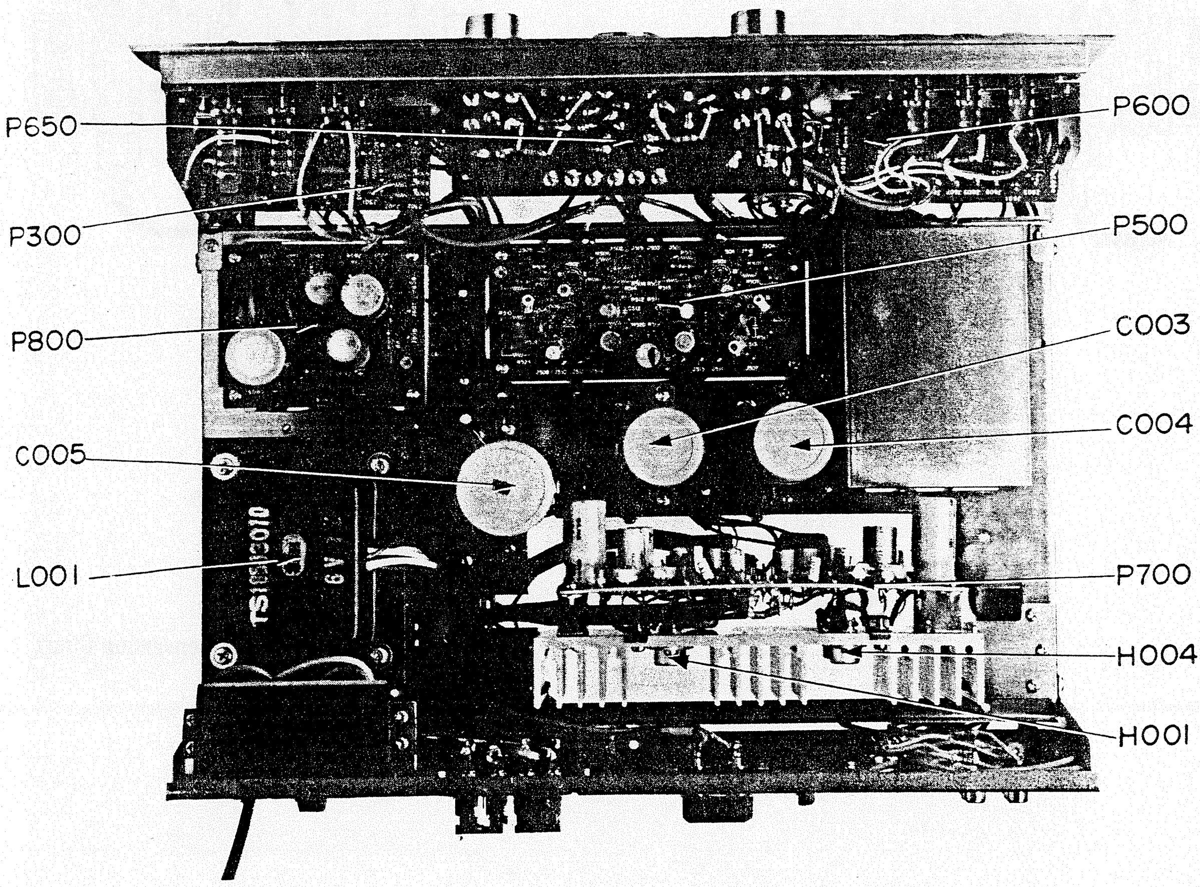

P650
P300
P800
C005
L001
P600
P500
C003
C004
P700
H004
H001

Figure 6. Main Chassis Component Locations (Top View)

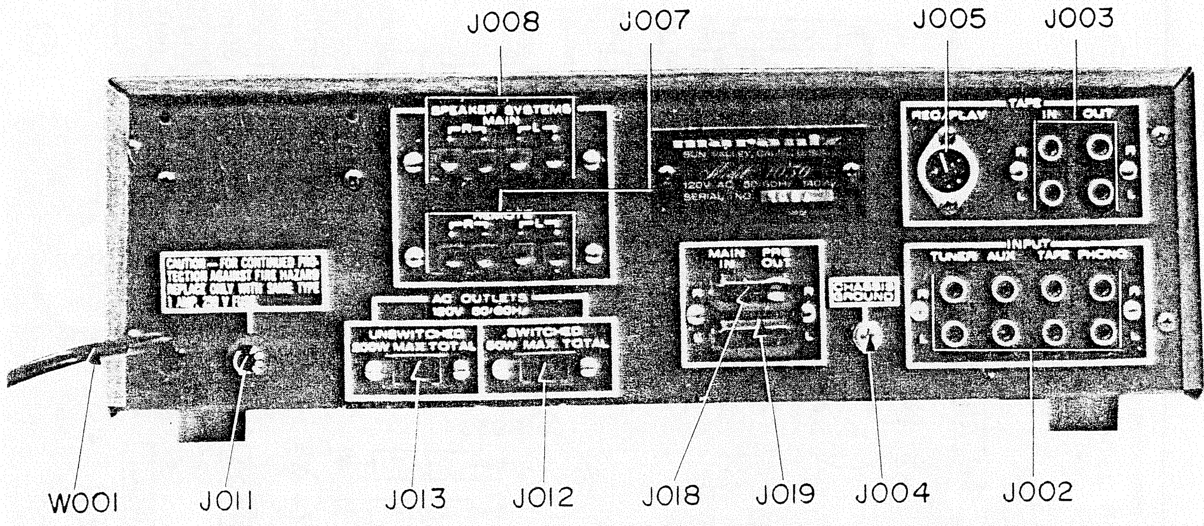

J008
J007
J005
J003
SPEAKER SYSTEMS
MAIN
REMOTE
TAPE
REC/PLAY
IN
OUT
AC OUTLETS
UNSWITCHED
SWITCHED
MAIN IN
PRE OUT
CHASSIS GROUND
INPUT
TUNER
AUX
TAPE
PHONO
W001
J011
J013
J012
J018
J019
J004
J002

Figure 7. Rear Panel Adjustment and Component Locations

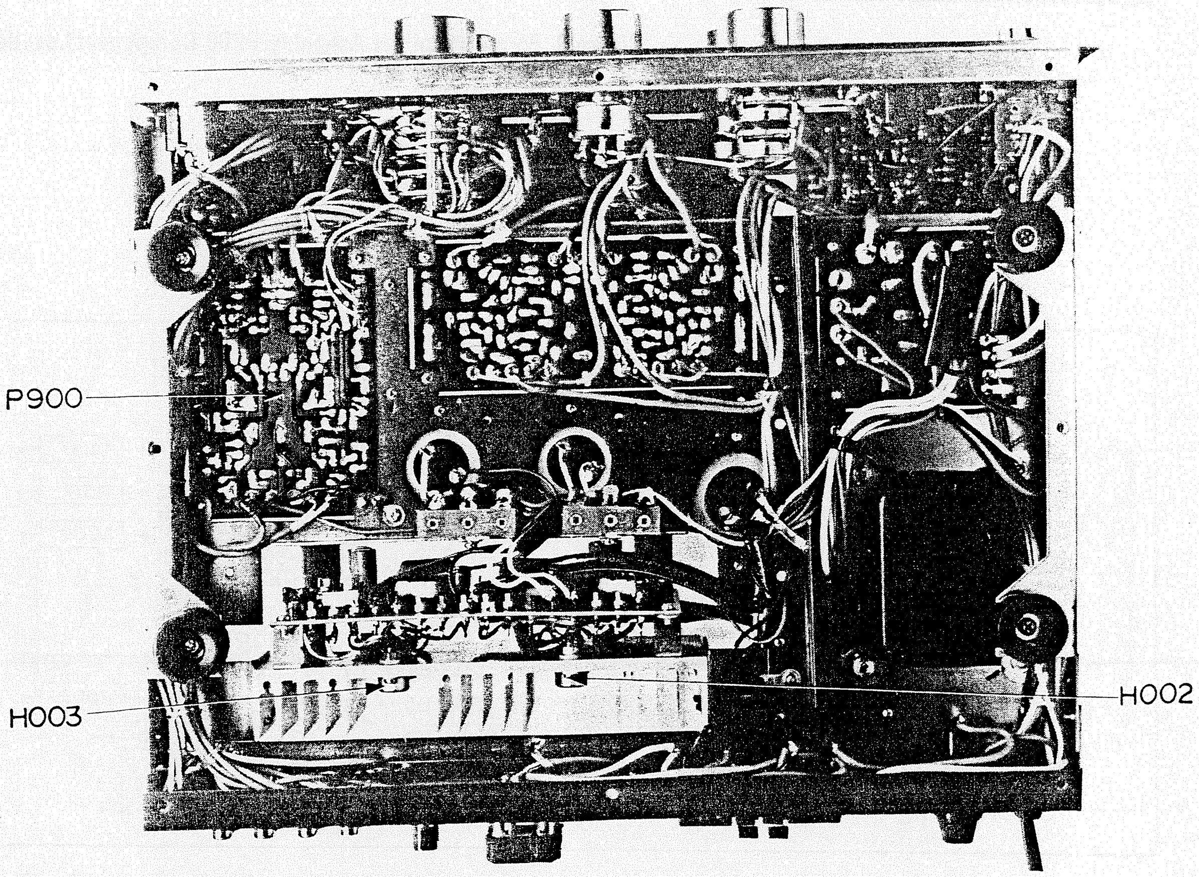
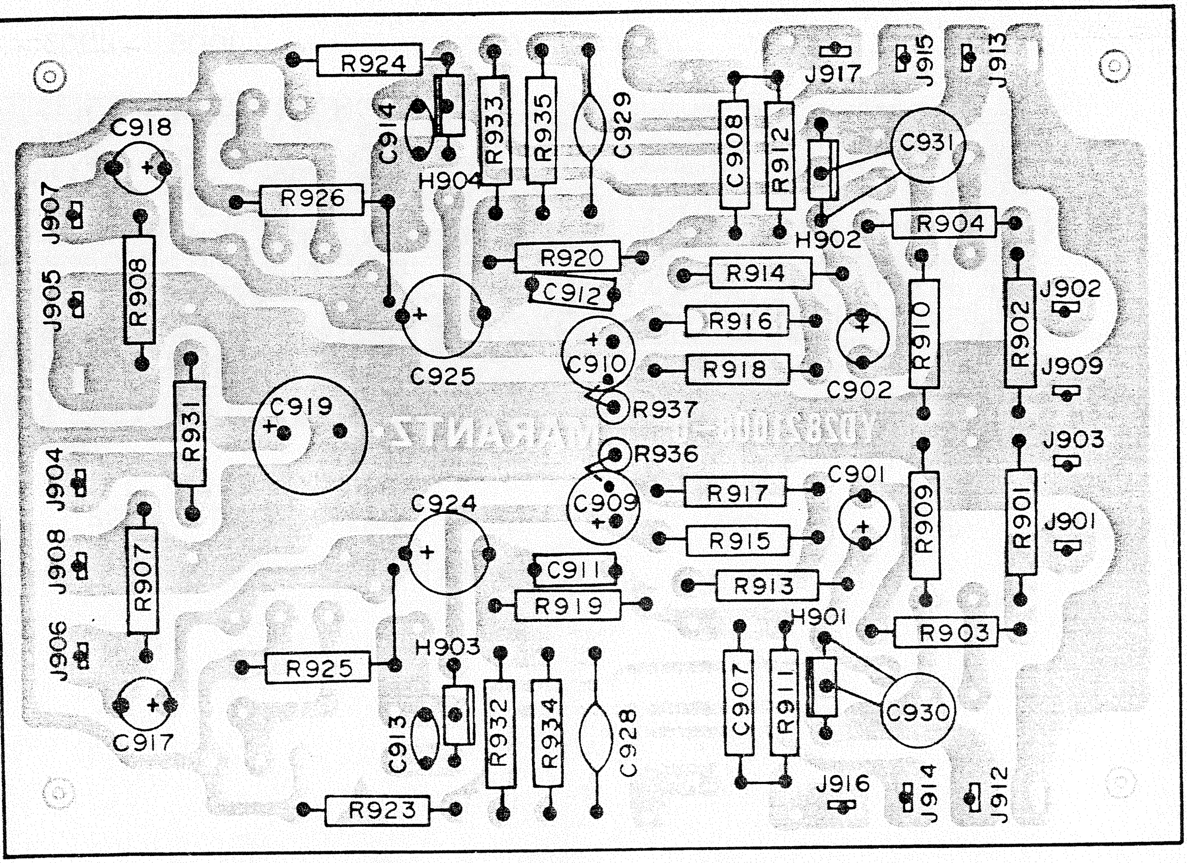

P900
H003
H002

Figure 8. Main Chassis Component Locations (Bottom View)


R924
C914
R933
R935
C929
J917
J915
J913
C918
H904
C908
R912
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J907
R926
H902
R904
R920
R914
C912
J905
R908
R916
R910
R902
J902
C925
C910
R918
C902
J909
R931
C919
R937
R936
J904
C901
J903
R917
C924
C909
J908
R907
R909
R901
J901
R915
C911
R913
R919
H901
R903
J906
H903
R925
C917
C907
R911
C930
C913
R932
R934
C928
J916
J914
J912
R923

Figure 9. Phono Amplifier Assembly P900 Component Locations

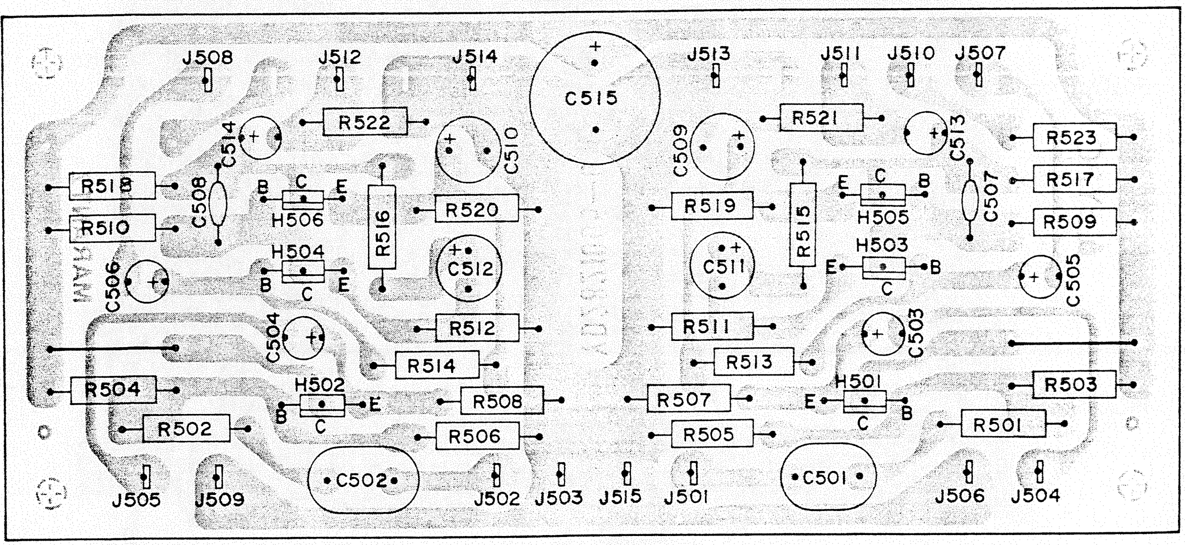
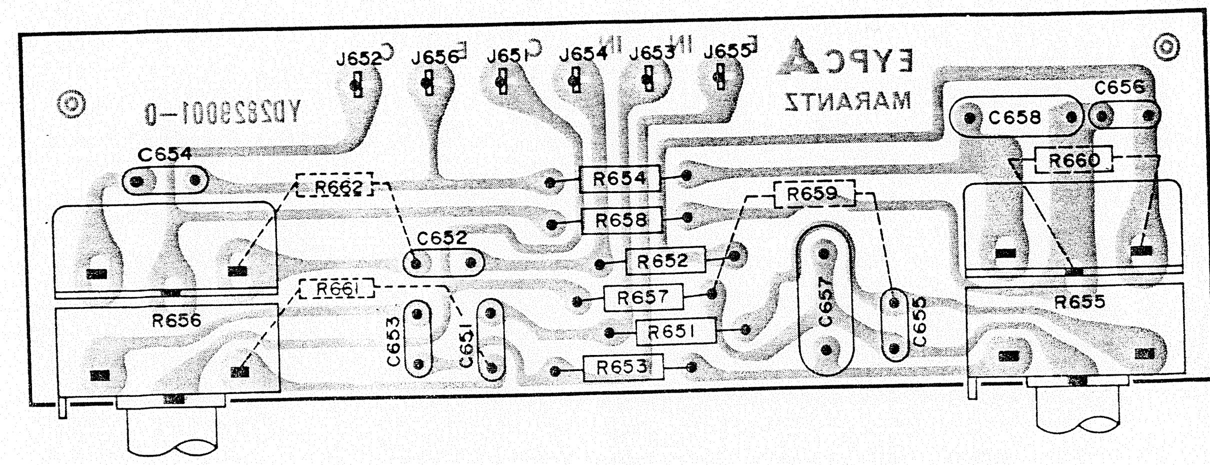

J508
J512
J514
C515
J513
J511
J510
J507
R522
R521
C514
C510
C509
C513
R523
R518
C508
B
C
E
H506
R516
R520
R519
R515
E
C
B
H505
R517
C507
R510
H504
B
C
E
C512
C511
H503
E
C
B
R509
C506
C505
C504
R512
R511
C503
R514
R513
R504
H502
B
C
E
R508
R507
H501
E
C
B
R503
R502
R506
R505
R501
C502
C501
J505
J509
J502
J503
J515
J501
J506
J504

Figure 10. Tone and Pre Amplifier Assembly P500 Component Locations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J656
J651
J654
J653
J655
C656
C658
C654
R662
R654
R658
R659
R660
C652
R652
R661
R657
R656
C653
C651
R651
C657
C655
R655
R653

Figure 11. Tone Control Volume Unit Assembly P650 Component Locations

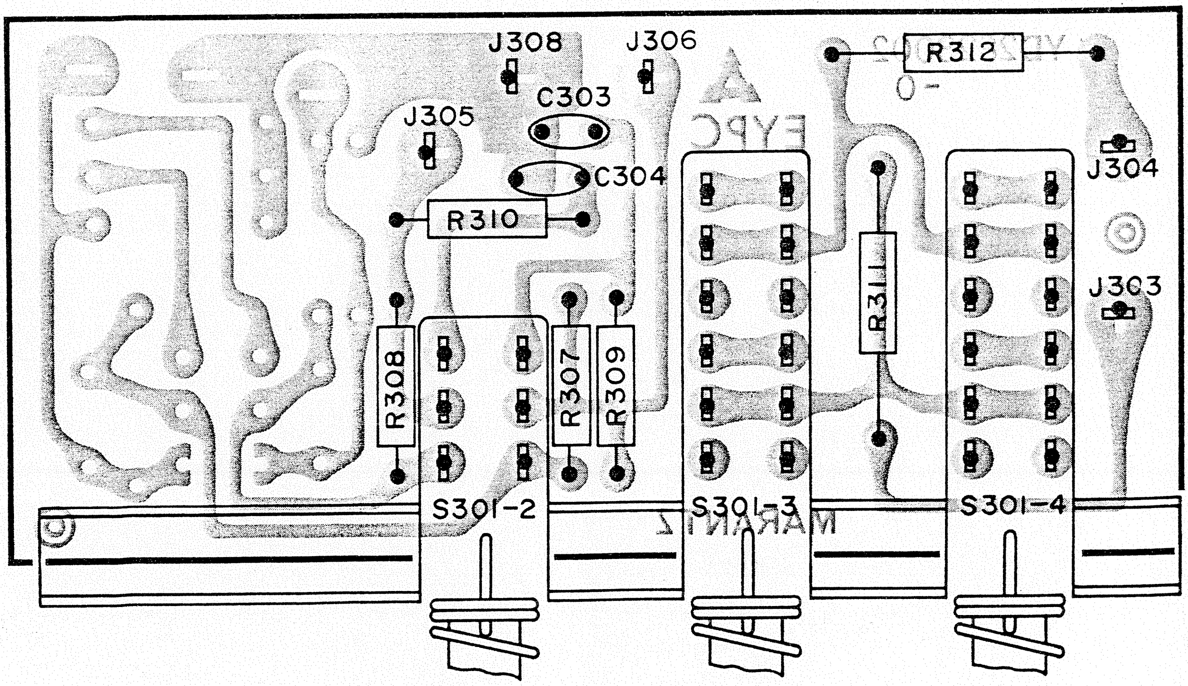
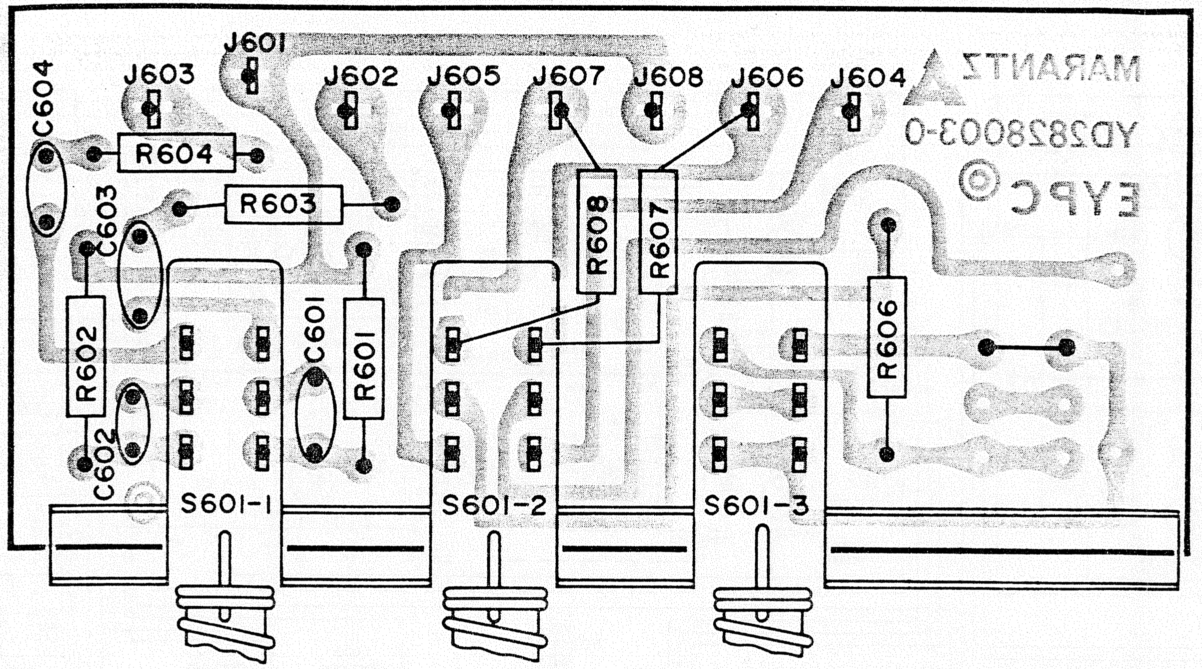

J308
J306
R312
C303
J305
C304
J304
R310
J303
R311
R308
R307
R309
S301-2
S301-3
S301-4

Figure 12. Main, Remoto, High and Low Filter Switch Unit Assembly P300 Component Locations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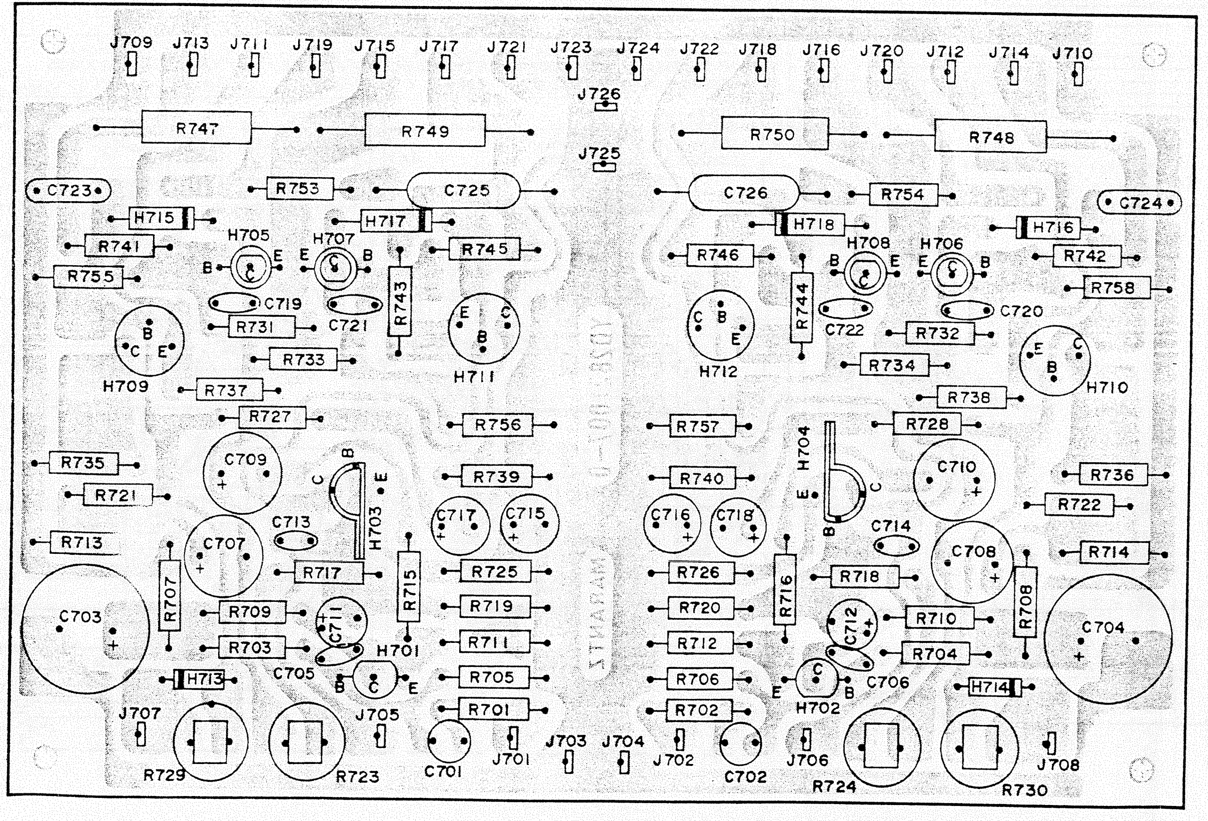
J606
J604
C604
R604
R603
C603
R608
R607
R606
R602
C601
R601
C602
S601-1
S601-2
S601-3

Figure 13. Loudness, Tape Moni. and Mono Switch Unit Assembly P600 Component Locations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J713
J711
J719
J715
J717
J721
J723
J724
J722
J718
J716
J720
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J710
J726
R747
R749
R750
R748
J725
C723
R753
C725
C726
R754
C724
H715
H717
H718
H716
R741
H705
H707
R745
R746
H708
H706
R742
R755
R758
C719
R743
R744
C720
R731
C721
C722
R732
R733
R734
H709
H711
H712
H710
R737
R738
R727
R756
R757
R728
R735
C709
R739
R740
H704
C710
R736
R721
H703
R722
R713
C707
C713
C717
C715
C716
C718
C714
C708
R714
R717
R725
R726
R718
C703
R707
R709
C711
R715
R719
R720
R716
C712
R710
R708
C704
R703
H701
R711
R712
R704
H713
C705
R705
R706
C706
H714
H702
J707
J705
R701
R702
R729
R723
C701
J701
J703
J704
J702
C702
J706
R724
R730
J708

Figure 14. Power Amplifier Assembly P700 Component Locations

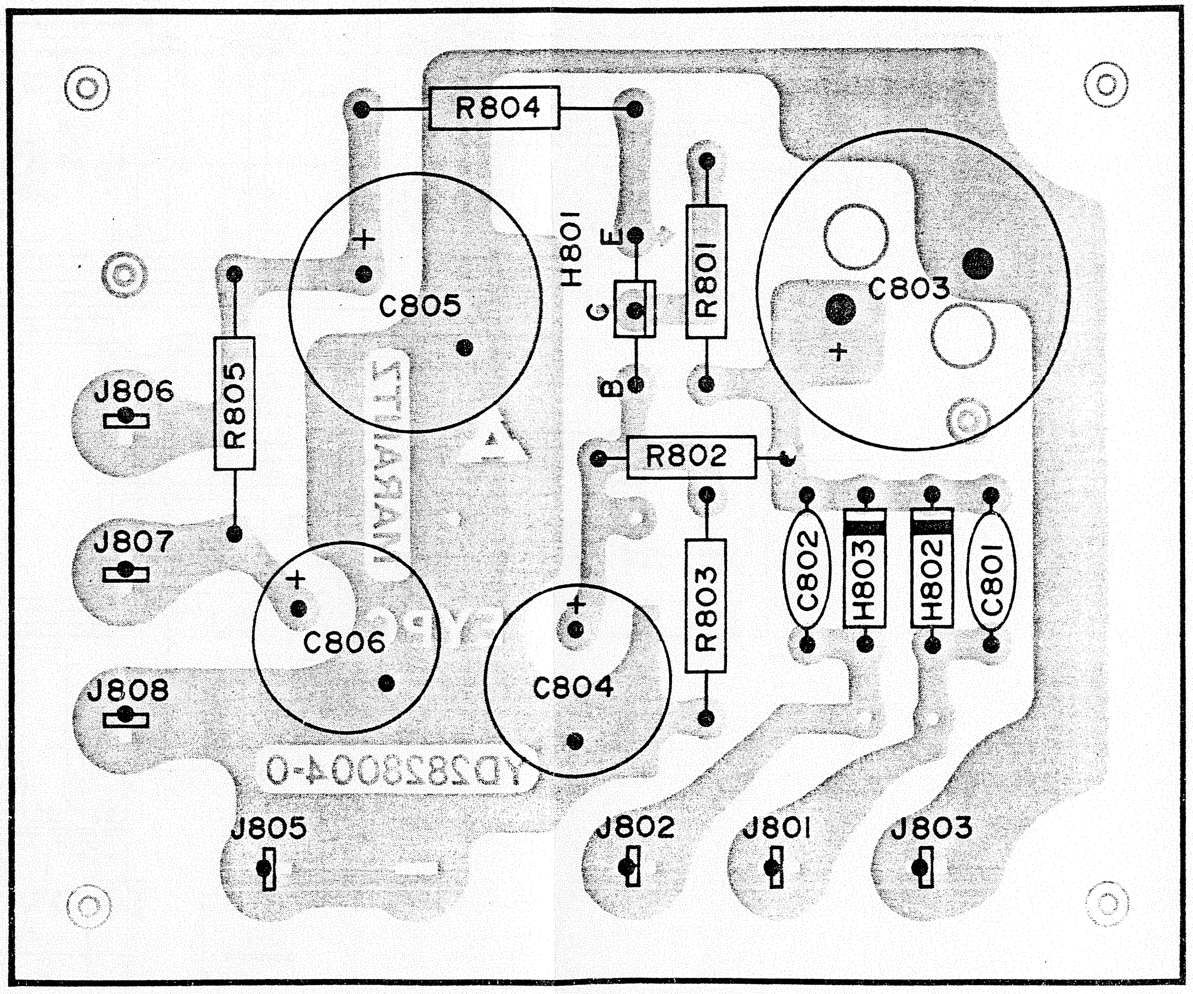
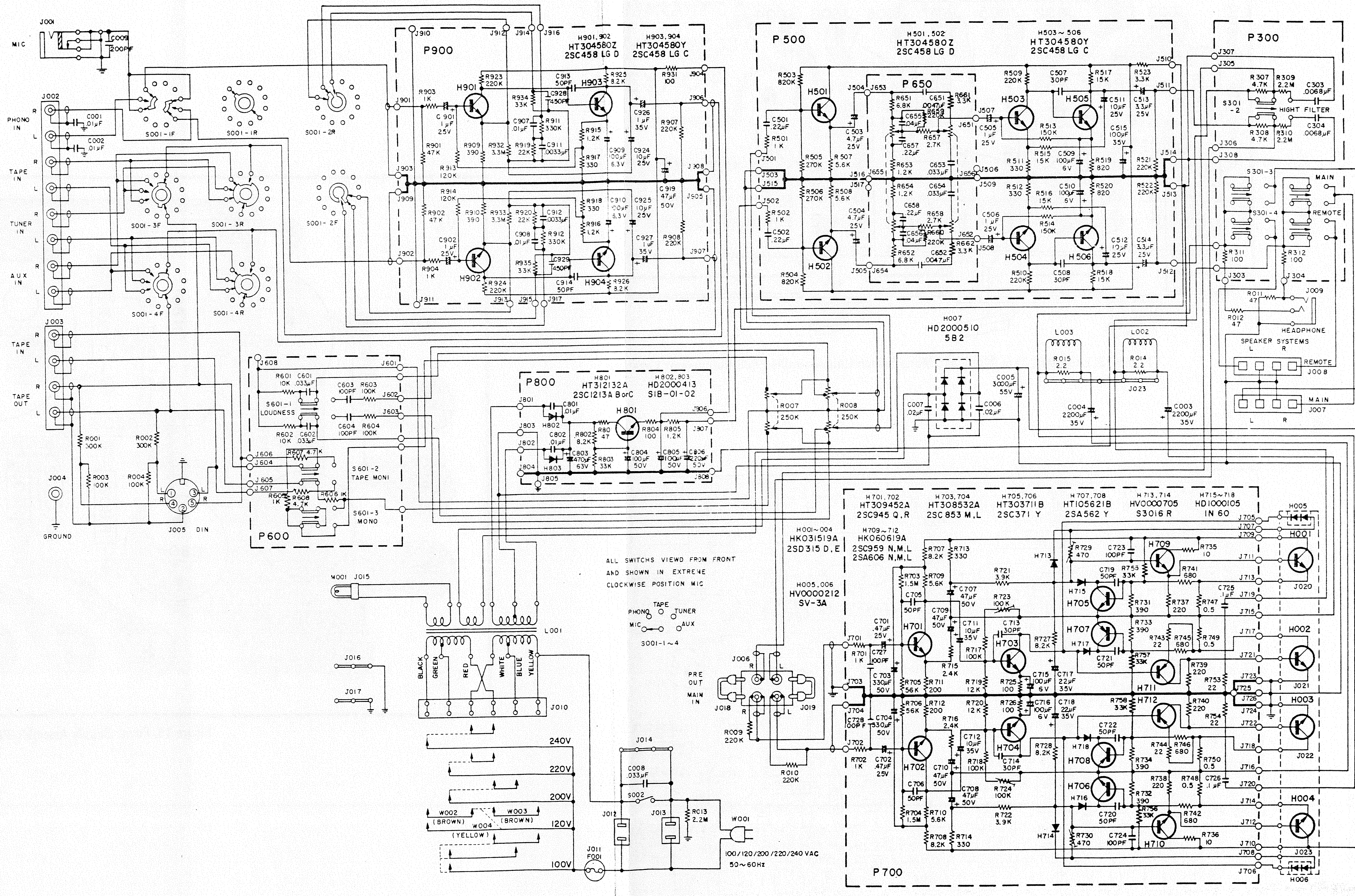

R804
H801
E
C
B
C805
R801
C803
R805
J806
R802
J807
C806
C804
R803
C802
H803
H802
C801
J808
J805
J802
J801
J803

Figure 15. Power Supply Assembly P800 Component Locations


MIC
J001
PHONO IN
TAPE IN
TUNER IN
AUX IN
TAPE IN
TAPE OUT
J004
GROUND
J005 DIN
S001-1F
S001-1R
S001-2R
S001-2F
S001-3F
S001-3R
S001-4F
S001-4R
P900
H901, 902 HT304580Z 2SC458 LG D
H903, 904 HT304580Y 2SC458 LG C
P500
H501, 502 HT304580Z 2SC458 LG D
H503~506 HT304580Y 2SC458 LG C
P650
P300
HIGHT FILTER
MAIN
REMOTE
HEADPHONE
SPEAKER SYSTEMS
P600
S601-1 LOUDNESS
S601-2 TAPE MONI
S601-3 MONO
P800
H801 HT312132A 2SC1213A B or C
H802, 803 HD2000413 S1B-01-02
H007 HD2000510 5B2
M001 J015
L001
BLACK
GREEN
RED
WHITE
BLUE
YELLOW
J010
240V
220V
200V
120V
100V
W002 (BROWN)
W003 (BROWN)
W004 (YELLOW)
J011 F001
S002
PRE OUT
MAIN IN
H001~004 HK031519A 2SD315 D,E
H005, 006 HV0000212 SV-3A
H701, 702 HT309452A 2SC945 Q,R
H703, 704 HT308532A 2SC853 M,L
H705, 706 HT303711B 2SC371 Y
H707, 708 HT105621B 2SA562 Y
H713, 714 HV0000705 S3016 R
H715~718 HD1000105 IN 60
H709~712 HK060619A 2SC959 N,M,L 2SA606 N,M,L
P700

ALL SWITCHS VIEWD FROM FRONT AND SHOWN IN EXTREME CLOCKWISE POSITION MIC

PHONO TAPE TUNER
MIC AUX
S001-1~4

100/120/200/220/240 VAC
50~60Hz

Figure 16. Schematic Diagram

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
A	282906340	Frame assembly
0102	282806301	Escutcheon
0121	257812001	Insulator x 2
0116	282805301	Cover
0402	51122608E	T.H.M. screw x 4
B	282916040	Rear bracket assembly
0130	282916001	Bracket
J002	YT0208002	8P Terminal
J003	YT0204003	4P Terminal x 2
J005	YJ1100001	Din socket
J007-J008	YT0304002	4P SPKR terminal x 2
J012-J013	YT0400018	AC outlet x 2
0432	51100308S	B H M screw x 2
505	55060307F	T R river x 4
0103	282825701	Lid
0104	282825702	Lid
0105	282926501	Indicator
0106	282926511	Indicator
0109	282815401	Knob x 3
0110	282815402	Knob x 2
0111	281815401	Knob x 6
0112	281815402	Knob
0117	282905301	Cover
0122	275905701	Leg x 4
0123	281825905	Bush x 7
0202	282810501	Chassis
0204	282816050	Bracket K
0209	282816003	Bracket
0210	282816004	Bracket
0213	282916004	Bracket x 4
0214	282916002	Bracket
0215	282916003	Bracket
216	282926701	Heat sink
0217	282812001	Insulator
0218	282812002	Insulator
0219	282026702	Heat sink x 2
0220	282910901	Shield
0221	282816013	Bracket
0222	282816014	Bracket
0227	71400219Q	Spring
0229	281812001	Insulator
0230	276325901	Bush
0232	318827102	Holder
0301	138200503	Clamper x 8
0302	273125302	Cover
0303	202705501	Collar x 4
0304	282126902	Protector
0305	281816006	Bracket
0311	257711803	Spacer
0312	145525901	Bush
0313	250712001	Insulator
0314	273025901	Bush

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
0315	282112001	Insulator x 2
0316	282812003	Insulator
0317	282111801	Spacer
0319	257711806	Spacer x 4
0322	54010089R	Washer
0329	282711801	Spacer x 3
0402	51122608E	T H M screw x 4
0403	51100406S	B H M screw x 4
0404	54020401S	Flat washer P x 4
0406	51100406S	B H M screw x 8
0407	54020401S	Flat washer P x 8
0409	51570410B	P H tapt screw x 4
0410	54020401E	Flat washer x 4
0411	54040402N	Spring washer x 4
0416	51570306B	P H tapt screw x 6
0417	51570306B	P H tapt screw x 4
0418	51570306B	P H tapt screw x 4
0419	51570306B	P H tapt screw x 2
0420	51570312B	P H tapt screw x 4
0421	51570306B	P H tapt screw x 2
0426	51100306S	B H M screw x 4
0427	51100306S	B H M screw x 2
0428	51100306S	B H M screw x 2
0429	51100306S	B H M screw x 2
0430	51570312B	P H tapt screw x 4
0433	51100306E	B H M screw x 2
0434	51100308S	B H M screw x 2
0501	51100308S	B H M screw x 2
0502	51100308S	B H M screw x 4
0503	53110303E	Hexagon nut x 12
0506	54050300R	T L washer OR x 4
0507	53110403E	Hexagon nut
0509	54050400R	T L washer OR
0510	54020401E	Flat washer P
0516	51570306B	P H tapt screw x 4
0517	51570306B	P H tapt screw x 4
0518	51570308B	P H tapt screw x 2
0519	51570305B	P H tapt screw x 8
0526	51570306B	P H tapt screw x 10
0527	51570306B	P H tapt screw x 8
0528	51570306B	P H tapt screw x 6
0529	51570306B	P H tapt screw x 12
0530	51570306B	P H tapt screw x 6
0601	51570306B	P H tapt screw x 2
0602	51570306B	P H tapt screw x 2
0603	51570306B	P H tapt screw
0604	51570306B	P H tapt screw x 8
0605	51570306B	P H tapt screw x 2
0606	54050300R	T L washer OR x 15
0610	54020501E	Flat washer P x 4
0611	54080400R	T L washer OR x 4

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
0612	53110403E	Hexagon nut x 4
0616	62031650W	Lug
0617	62031650W	Lug
0618	62031650W	Lug
0619	62031650W	Lug
0631	51570312B	P H tapt screw x 2
0632	54050300R	T L washer OR x 2
0633	53110303E	Hexagon nut x 2

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
P900	YD2821008 (ZZ2821008)	P.C. Board P.C. Board Assembly
		RESISTORS
R901-R902	RT0547314	Carbon, 47KΩ, ±5%, 1/4W
R903-R904	RT1010214	Carbon, 1KΩ, ±10%, 1/4W
R907-R908	RT0522414	Carbon, 220KΩ, ±5%, 1/4W
R909-R910	RT0539114	Carbon, 390Ω, ±5%, 1/4W
R911-R912	RT0539414	Carbon, 390KΩ, ±5%, 1/4W
R913-R914	GT0512412	Carbon, 120KΩ, ±5%, 1/2W
R915-R916	RT0512214	Carbon, 1.2KΩ, ±5%, 1/4W
R917-R918	RT0530114	Carbon, 300Ω, ±5%, 1/4W
R919-R920	RT0522314	Carbon, 22KΩ, ±5%, 1/4W
R923-R924	GT0522412	Carbon, 220KΩ, ±5%, 1/2W
R925-R926	RT0582214	Carbon, 8.2KΩ, ±5%, 1/4W
R931	RT1010114	Carbon, 100Ω, ±10%, 1/4W
R932-R933	RN1033514	Carbon, 3.3MΩ, ±10%, 1/4W
R934-R935	RT0533314	Carbon, 33KΩ, ±5%, 1/4W
R936-R937	RT0510114	Carbon, 100Ω, ±5%, 1/4W
		CAPACITORS
C901-C902	EV2250251	Elect., 2.2μF, +40%, −20%, 25V
C907-C908	DF1610301	Mylar, 0.01μF, ±10%
C909-C910	ED1070061	Elect., 100μF, 6.3V
C911-C912	DF1633201	Mylar, 0.0033μF, ±10%
C913-C914	DD1650001	Ceramic, 50pF, ±10%, 50V
C917-C918	EV1050351	Elect., 1μF, +40%, −20%, 35V
C919	EA4760509	Elect., 47μF, 50V
C924-C925	EE1060251	Elect., 10μF, 25V
C928-C929	DF6545101	Mylar, 450pF, ±5%
C930-C931	DD1650001	Ceramic, 50pF, ±10%, 50V
		SEMICONDUCTORS
H901-H902	HT313441E	Transistor, 2SC1344E
H903-H904	HT304580S	Transistor, 2SC458 LG, AC
		MISCELLANEOUS
J901-J909	YP1000099	Plug
J912-J917	YP1000099	Plug
P500	YD2821005 (ZZ2821005)	P.C. Board P.C. Board Assembly
		RESISTORS
R501-R502	RT1010214	Carbon, 1KΩ, ±10%, 1/4W
R503-R504	RN1082414	Carbon, 820KΩ, ±10%, 1/4W
R505-R506	RN1027414	Carbon, 270KΩ, ±10%, 1/4W
R507-R508	RT0556214	Carbon, 5.6KΩ, ±5%, 1/4W
R509-R510	RN1022414	Carbon, 220KΩ, ±10%, 1/4W
R511-R512	RT0533114	Carbon, 330Ω, ±5%, 1/4W
R513-R514	RN1015414	Carbon, 150KΩ, ±10%, 1/4W
R515-R518	RT1015314	Carbon, 15KΩ, ±10%, 1/4W
R519-R520	RT1082114	Carbon, 820Ω, ±10%, 1/4W
R521-R522	RT1022414	Carbon, 220KΩ, ±10%, 1/4
R523	RT1033214	Carbon, 3.3KΩ, ±10%, 1/

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		CAPACITORS
C501-C502	DF1722402	Mylar, 0.22µF, ±20%
C503-C504	EA4750359	Elect., 4.7µF, 35V
C505-C506	EV1050252	Elect., 1µF, 25V
C507-C508	DD1630001	Ceramic, 30pF, ±10%
C509-C510	EA1070109	Elect., 100µF, 10V
C511-C512	EA1060359	Elect., 10µF, 35V
C513-C514	EV3350252	Elect., 3.3µF, 25V
C515	EA1070359	Elect., 100µF, 35V
		SEMICONDUCTORS
H501-H502	HT304580Z	Transistor, 2SC458LG (D)
H503-H506	HT304580Y	Transistor, 2SC458LG (C)
		MISCELLANEOUS
01-J517	YP1000099	Plug
P650	YD2829001	P.C. Board
	(ZZ2829001)	P.C. Board Assembly
		RESISTORS
R651-R652	RT1068214	Carbon, 6.8KΩ, ±10%, 1/4W
R653-R654	RT1012214	Carbon, 1.2KΩ, ±10%, 1/4W
R655-R656	RM0503043	Variable, 50KΩ, A
R657-R658	RT1027214	Carbon, 2.7KΩ, ±10%, 1/4W
R659-R660	RT1022414	Carbon, 220KΩ, ±10%, 1/4W
R661-R662	RT1033214	Carbon, 3.3KΩ, ±10%, 1/4W
		CAPACITORS
C651-C652	DF1747201	Mylar, 0.0047µF, ±20%, 50V
C653-C654	DF1733301	Mylar, 0.033µF, ±20%, 50V
C655-C656	DF1740301	Mylar, 0.04µF, ±20%, 50V
C657-C658	DF1722402	Mylar, 0.22µF, ±20%, 50V
		MISCELLANEOUS
51-J656	YP1000099	Plug
P300	YD2828002	P.C. Board
	(ZZ2828002)	P.C. Board Assembly
		RESISTORS
R307-R308	RT0547214	Carbon, 4.7KΩ, ±10%, 1/4W
R309-R310	RT1022514	Carbon, 2.2MΩ, ±20%, 1/4W
R311-R312	RT1010101	Carbon, 100Ω, ±10%, 1W
		CAPACITORS
C303-C304	DF1668201	Mylar, 0.0068µF, ±10%, 50V
		MISCELLANEOUS
S301	SP0403005	Push Switch
J303-J308	YP1000099	Plug
P600	YD2828003	P.C. Board
	(ZZ2828003)	P.C. Board Assembly
		RESISTORS
R601-R602	RT0510314	Carbon, 10KΩ, ±5%, 1/4W

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
R603-R604	RT0510414	Carbon, 100KΩ, ±5%, 1/4W
R605-R606	RT1010214	Carbon, 1KΩ, ±10%, 1/4W
R607-R608	RT1047214	Carbon, 4.7KΩ, ±10%, 1/4W
		CAPACITORS
C601-C602	DF1733301	Mylar, 0.033µF, ±20%, 50V
C603-C604	DD1510101	Ceramic, 100pF, ±5%
		MISCELLANEOUS
S601	SP0203002	Push Switch for Loudness, Tape Mo
J601-J608	YP1000099	Plug
P700	YD2821007	P.C. Board
	(ZZ2821007)	P.C. Board Assembly
		RESISTORS
R701-R702	RT1010214	Carbon, 1KΩ, ±10%, 1/4W
R703-R704	RN1015514	Carbon, 1.5MΩ, ±10%, 1/4W
R705-R706	RN1056314	Carbon, 56KΩ, ±10%, 1/4W
R707-R708	RC1082212	Solid, 8.2KΩ, ±10%, 1/2W
R709-R710	RT1056214	Carbon, 5.6KΩ, ±10%, 1/4W
R711-R712	GT0520112	Carbon, 200Ω, ±5%, 1/2W
R713-R714	RC1033112	Solid, 330Ω, ±10%, 1/2W
R715-R716	GT0522212	Carbon, 2.2KΩ, ±5%, 1/2W
R717-R718	RN1010414	Carbon, 100KΩ, ±10%, 1/4W
R719-R720	RT1012314	Carbon, 12KΩ, ±10%, 1/4W
R721-R722	RC1039212	Solid, 3.9KΩ, ±10%, 1/2W
R723-R724	RA0104012	Trimmer, 100KΩ, B
R725-R726	RC1010112	Solid, 100Ω, ±10%, 1/2W
R727-R728	RC1082212	Solid, 8.2KΩ, ±10%, 1/2W
R729-R730	RA0501005	Trimmer, 470Ω, B
R731-R734	RC1039112	Solid, 390Ω, ±10%, 1/2W
R735-R736	RC1010012	Solid, 10Ω, ±10%, 1/2W
R737-R740	RC1022112	Solid, 220Ω, ±10%, 1/2W
R741-R742	RC1068112	Solid, 680Ω, ±10%, 1/2W
R743-R744	RC1022012	Solid, 22Ω, ±10%, 1/2W
R745-R746	RC1068112	Solid, 680Ω, ±10%, 1/2W
R747-R750	GW1050202	Wire Wound, 0.5Ω, 2W
R753-R754	RC1010012	Solid, 10Ω, ±10%, 1/2W
R755-R758	RC1033312	Solid, 33KΩ, ±10%, 1/2W
		CAPACITORS
C701-C702	EV4740251	Elect., 0.47µF, 25V
C703-C704	EA3370509	Elect., 330µF, 50V
C705-C706	DD1650001	Ceramic, 50pF, ±10%, 50V
C707-C710	EA4760509	Elect., 47µF, 50V
C711-C712	EA1060359	Elect., 10µF, 35V
C713-C714	DD1630001	Ceramic, 30pF, ±10%
C715-C716	EA1070109	Elect., 100µF, 10V
C717-C718	EA2260359	Elect., 22µF, 35V
C719-C722	DD1650001	Ceramic, 50pF, ±10%
C723-C724	DF3610152	Mylar, 100pF, ±10%
C725-C726	DF1710452	Mylar, 0.1µF, ±20%, 200V
C727-C728	DD1610101	Ceramic, 100pF, ±10%

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		SEMICONDUCTORS
H701-H702	HT309452A	Transistor, 2SC945 Q, R
H703-H704	HT308532A	Transistor, 2SC853 M. L
H705-H706	HT303711B	Transistor, 2SC371 O
H707-H708	HT105621B	Transistor, 2SA562 O
H709-H712	HK060619A	Transistor 2SC959 2SA606 N.M.L
H713-H714	HV0000705	Varistor, S3016R
H715-H718	HD1000105	Diode, 1N60
		MISCELLANEOUS
J701-J726	YP1000099	Plug
P800	YD2828004 (ZZ2828004)	P.C. Boad P.C. Board Assembly
		RESISTORS
R801	RC1047012	Solid, 47Ω, ±10%, 1/2W
R802	RC1082212	Solid, 8.2KΩ, ±10%, 1/2W
R803	RC1033312	Solid, 33KΩ, ±10%, 1/2W
R804	RC1047112	Solid, 470Ω, ±10%, 1/2W
R805	RC1012212	Solid, 1.2KΩ, ±10%, 1/2W
		CAPACITORS
C801-C802	DK1810351	Ceramic, 0.01µF, +100%, −0%, 500V
C803	EB4770631	Elect., 470µF, 63V
C804-C805	EA1070509	Elect., 100µF, 50V
C806	EA2270631	Elect., 220µF, 63V
		SEMICONDUCTORS
H801	HT312132A	Transistor, 2SC1213A B or C
H802-H803	HD2000413	Diode, SIB-01-02
		MISCELLANEOUS
J801-J803	YP1000099	Plug
J805-J808	YP1000099	Plug
		RESISTORS
R001-R002	RT1030414	Carbon, 300KΩ, ±10%, 1/4W
R003-R004	RT1010414	Carbon, 100KΩ, ±10%, 1/4W
R007	RM0254019	Variable, 250KΩ HB Balance
R008	RM0254021	Variable, 250KΩ A Volume
R009-R010	RT1022414	Carbon, 220KΩ, ±10%, 1/4W
R011-R012	RC1047012	Solid, 47Ω, ±10%, 1/2W
R013	GT0522501	Carbon, 2.2MΩ, ±5%, 1W
R014-R015	RC1002212	Solid, 2.2Ω, ±10%, 1/2W
R016	RT1047214	Carbon, 4.7KΩ, ±10%, 1/2W
		CAPACITORS
C001-C002	DK1710301	Ceramic, 0.01µF, 50V
C003-C004	EC2280352	Elect., 2200µF, 35V
C005	EC4780551	Elect., 4700µF, 55V
C006-C007	DO0720350	Oil Paper, 0.02µF, ±20%, 600VDC
C008	DO0733380	Oil Paper, 0.033µF, ±20%, 800VAC
C009	DD1620101	Ceramic, 200pF
C010	DD1650001	Ceramic, 50pF
C011-C012	DO0710281	Oil Paper, 0.001µF, ±20%, 800V

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		SEMICONDUCTORS
H001-H004	HK031519A	Transistor, 2SD315DE, 2SD315DE
H005	HV0000212	Varistor, SV-3A
H006	HV0000212	Varistor, SV-3A
H007	HD2000510	Diode, 5B2
		MISCELLANEOUS
S001	SR0605009	Rotary Switch for Function
S002	SP0201010	Push Switch for Power
M001	IN1008001	Lamp for Power
F001	FS1015002	Fuse, UL-1.5A
L001	TS1850301	Power Transf.
L002-L003	LL2291512	Choke Coil
W001	YC0240010	AC Cord
W002-W003	YB0007001	Connective Cord
W004	YB0027001	Connective Cord
W005	YW2829001	Wire Material
W006	YX2829001	Wire Material
J001	YJ0100055	Mic In Jack
J004	YL0301021	Ground Terminal
J006	YT0204003	4P (Pre Out Main in) Terminal
J009	YJ0100065	Headphone Jack
J010	YL0106004	Terminal for AC Voltage Select
J011	YJ0800012	Fuse Holder Jack
J014	YL0105004	5P Terminal
J015	YJ0200007	Lamp Socket
J016-J017	YL0103011	3P Terminal
J018-J019	YP1000097	Pre Out/Main in Plug
J023	YL0107005	7P Terminal

PECIFICATIONS

Gain—Phone (low level) to pre-amp output	54 dB
Phono to recording output	37 dB
High level to pre-amp output	17 dB
Input Impedance—Low level input	Phone 47K Microphone 47K
High level input	100K
Input Sensitivity—Phono (low)	2.1mV to equal 1 volt output at pre-amp out
Frequency Response	±1 dB, 20 Hz to 20 KHz at rated power output
Intermodulation Distortion	Less than 0.5% at rated power output from 40 Hz to 20 KHz with both channels driven (S.M.P.T.E.)
Total Harmonic Distortion	Less than 0.5% at rated power output 40 Hz to 20 KHz with both channels driven
Damping Factor	Greater than 45 into8 ohmsload
Total Noise—From magnetic phono input to power amp output	Less than 1.5μV equivalent input at rated output into 8 ohms
Volume Tracking	Within 3 dB
Rated continuous (RMS) power output per channel, both channels operating simultaneously	15 Watts at 4 and 8 ohms 10 Watts at 16 ohms
Comparable Total Music Power (IHF)	45 Watts at 8 ohms
Power Requirements	100/120/200/220/240V AC
At rated output, both channels operating	110 Watts
Idling Power (Volume Control at zero)	29 Watts
Dimensions—Panel Width	14-11/64 inches
Panel Height	4-23/32 inches
Depth	11-1/32 inches
Weight—Unit alone	16.5 lbs
Packed for shipment	23.3 lbs

* These specifications and exterior designs may be changed for improvement without advance notice.

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MODEL 1030 SERVICE MANUAL FOR EUROPEAN MARCKET

Included in this service manual are top view and rear view photographes, schematic diagram and individual parts list.

On the circuit description alignment method and repairing hints, refer to the orginal service manual.

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Schematic Diagram 2
Parts List 3

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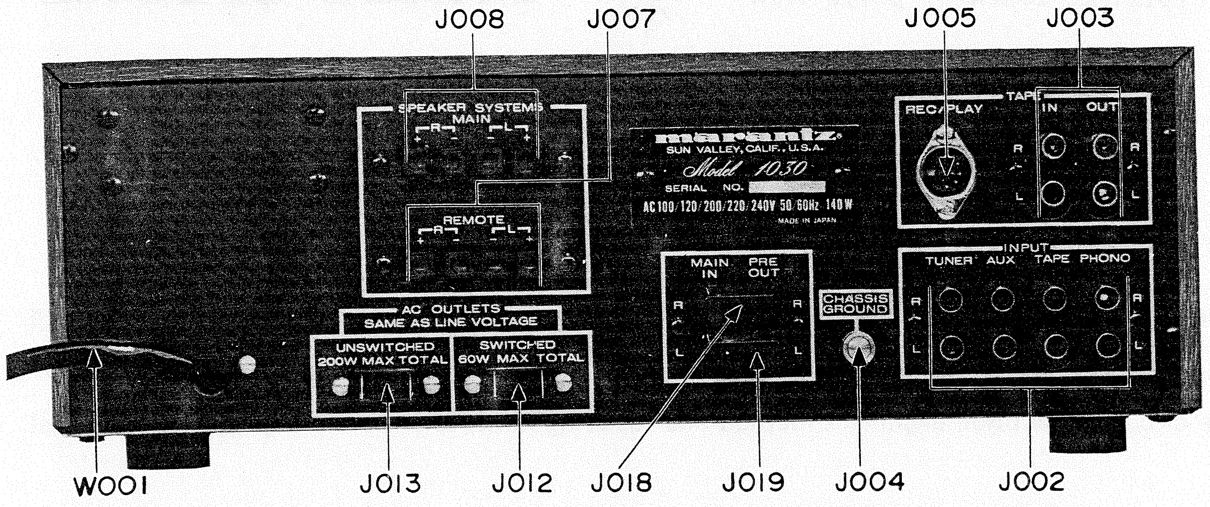
J008
J007
J005
J003
SPEAKER SYSTEMS
MAIN
R
L
REMOTE
marantz
SUN VALLEY, CALIF., U.S.A.
Model 1030
SERIAL NO.
AC 100/120/200/220/240V 50/60Hz 140W
MADE IN JAPAN
TAPE
REC/PLAY
IN
OUT
INPUT
TUNER
AUX
TAPE
PHONO
MAIN IN
PRE OUT
CHASSIS GROUND
AC OUTLETS
SAME AS LINE VOLTAGE
UNSWITCHED
200W MAX TOTAL
SWITCHED
60W MAX TOTAL
W001
J013
J012
J018
J019
J004
J002

Figure 1. Rear Panel Adjustment and Component Locations

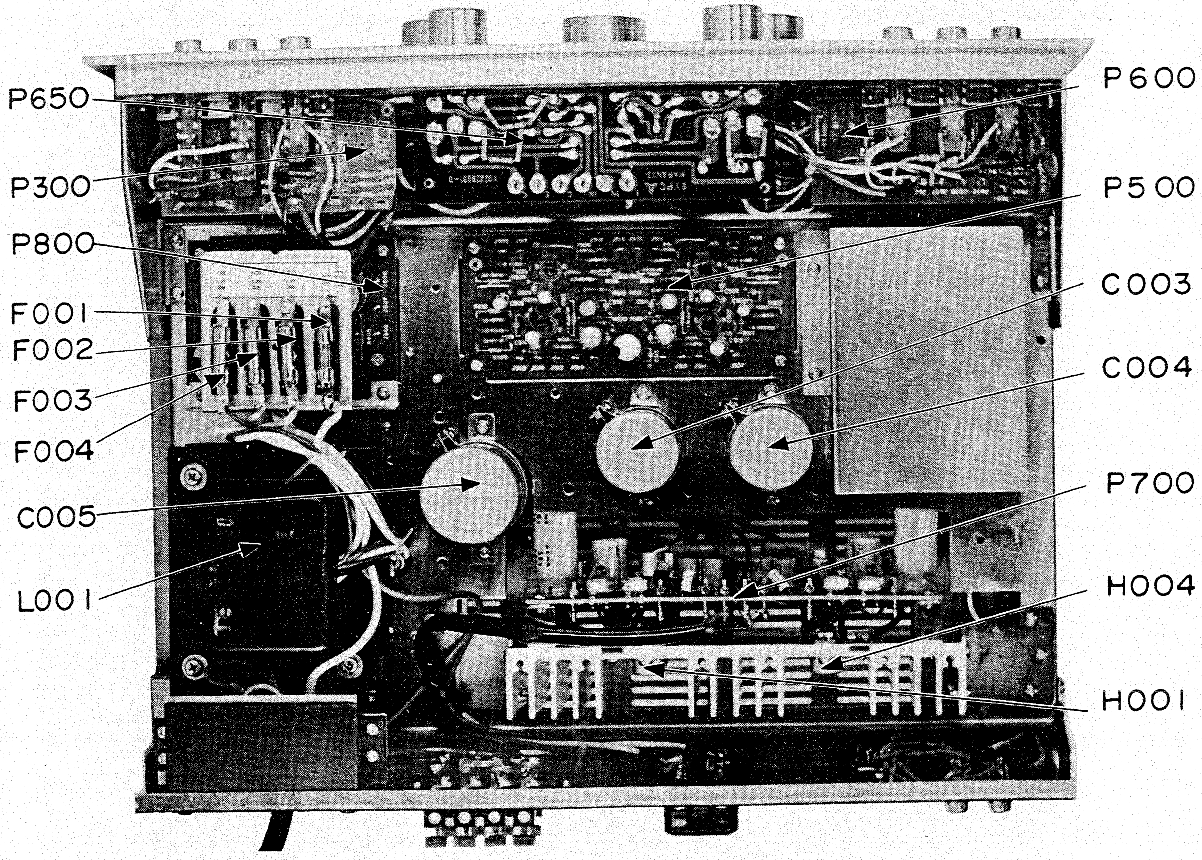
P650
P300
P800
F001
F002
F003
F004
C005
L001
P600
P500
C003
C004
P700
H004
H001

Figure 2. Main Chassis Component Locations (Top View)

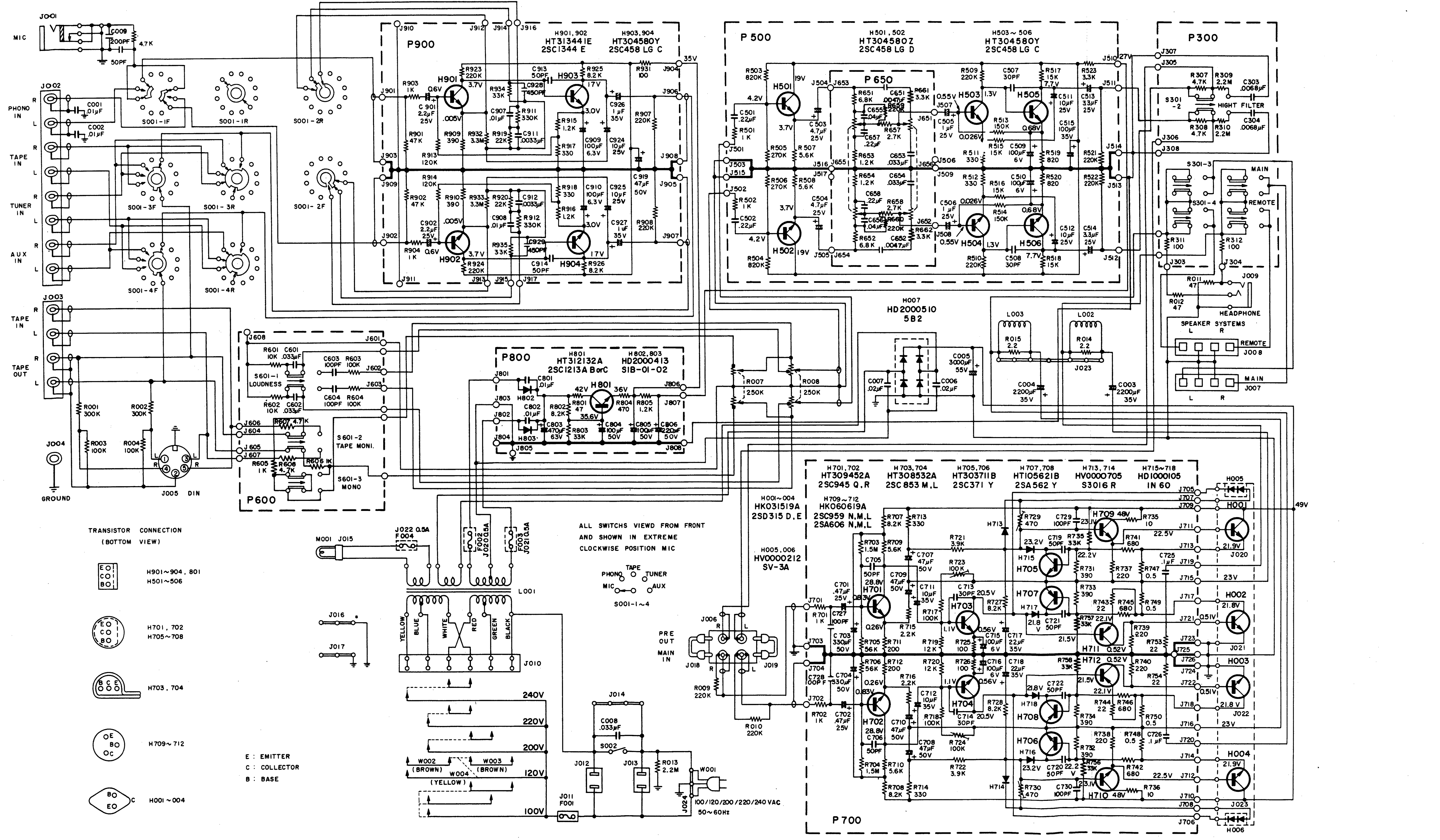
MIC
PHONO IN
TAPE IN
TUNER IN
AUX IN
TAPE IN
TAPE OUT
GROUND
J005 DIN
P900
H901,902 HT313441E 2SC1344 E
H903,904 HT304580Y 2SC458 LG C
P500
H501,502 HT304580Z 2SC458 LG D
H503~506 HT304580Y 2SC458 LG C
P650
P300
HIGHT FILTER
MAIN
REMOTE
HEADPHONE
SPEAKER SYSTEMS
P600
S601-1 LOUDNESS
S601-2 TAPE MONI.
S601-3 MONO
P800
H801 HT312132A 2SC1213A BorC
H802,803 HD2000413 S1B-01-02
H007 HD2000510 5B2
P700
H701,702 HT309452A 2SC945 Q,R
H703,704 HT308532A 2SC853 M,L
H705,706 HT303711B 2SC371 Y
H707,708 HT105621B 2SA562 Y
H713,714 HV0000705 S3016 R
H715~718 HD1000105 IN 60
H001~004 HK031519A 2SD315 D,E
H709~712 HK060619A 2SC959 N,M,L 2SA606 N,M,L
H005,006 HV0000212 SV-3A
PRE OUT
MAIN IN
49V
TRANSISTOR CONNECTION (BOTTOM VIEW)
H901~904, 801 H501~506
H701, 702 H705~708
H703, 704
H709~712
H001~004
E : EMITTER
C : COLLECTOR
B : BASE
ALL SWITCHS VIEWD FROM FRONT AND SHOWN IN EXTREME CLOCKWISE POSITION MIC
PHONO TAPE TUNER MIC AUX
S001-1~4
M001 J015
L001
YELLOW BLUE WHITE RED GREEN BLACK
240V
220V
200V
120V
100V
W002 (BROWN)
W003 (BROWN)
W004 (YELLOW)
J011 F001
S002
W001
100/120/200/220/240 VAC 50~60Hz

Figure 3. Schematic Diagram

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		ELECTRICAL PARTS
S002	SP0101010	Power Push Switch
F001	FS1010003	Fuse 1A
F002-F004	FS1005003	Fuse 0.5A
W001	YC0190003	AC Cord
W007	YW2829002	Wire Material
J011-J022	YJ0800009	Fuse Socket
J024	YL0103001	Terminal

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		MECHANICAL PARTS
0106	282926511	Indicator
0131	282916011	Bracket
0325	282816012	Bracket
0326	282926512	Indicator
0327	282125901	Bush
0620	62031650W	Lug
0621	51062608E	P. H. M. Screw x4
0622	53112603E	Hexagon Nut x4
0623	53110303A	Hexagon Nut x2
0624	54050300R	T. L. Washer OR x2
0625	51060316A	P. H. M. Screw x2
0626	55060305F	T. R. Rivet x2

* To be used in the European Model only.

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		ELECTRICAL PARTS
S002	SP0201010	Power Push Switch
F001	FS1015002	Fuse 1.5A
W001	YC0240010	AC Cord
J011	YJ0800012	Fuse Holder Jack

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
		MECHANICAL PARTS
0105	282926501	Indicator
0130	282916001	Bracket
0312	145525901	Bush

* To be used in the U.S.A. Model only.